

# Importance of pigtailed macaques (*Macaca nemestrina leonina*) in seed dispersal and impact on the ecological balance of the tropical rainforest at Khao Yai National Park, Thailand

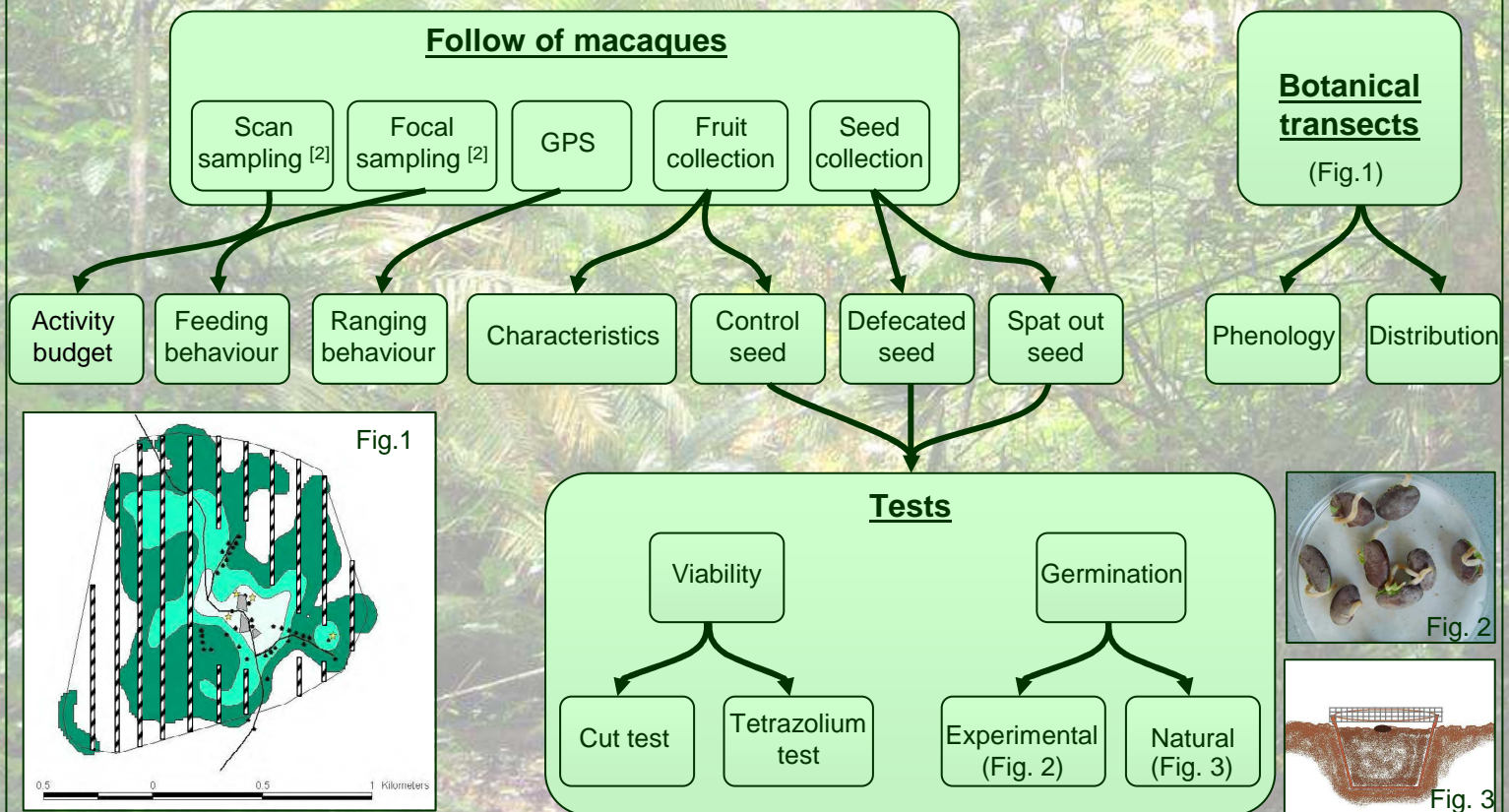
(Aurélien Albert, Marie-Claude Huynen)

## Introduction

Primates have a significant impact on tropical forest dynamics by **dispersing the seeds** of trees from which they feed. Most of the primate seed dispersion results from **ingestion** of seeds followed by **defecation**, and certain categories of primates, the **Cercopithecinae** monkeys, also store fruit and seeds in their **cheek pouches** before processing and spitting them out later. The dispersion of seeds **far** from the mother plant will increase its probability of **survival**. Seed dispersal is thus a crucial process for the **preservation** of tropical forests but the role of large frugivores as seed dispersers is not well understood in Southeast Asia. Moreover, very little is known about seed-handling by Cercopithecine monkeys and their role in seed dispersal <sup>[1]</sup>. But we still do not know exactly how this seed processing and dispersal processes operate and to obtain this knowledge, we need a detailed analysis of specific primate species.

Indeed, **pigtailed macaques** present behavioural and ecological characteristics consistent with seed dispersal capacities, such as a diet mainly composed of **fruits**, cheek pouches **storage**, widely **distributed** resources, **rapid** terrestrial travel, and **large** home range including a diversity of habitats. We need now to go further in the study to demonstrate the role of macaques in forest **regeneration**.

## Methodology



## Predictions

We can predict that pigtailed macaques will:

- disperse the seeds of many species
- disperse many seeds
- visit many times the same fruiting trees
- deposit seeds in a suitable way
- improve germination by the seed treatment

## References

- [1] Corlett, R. T. & Lucas, P. W. 1990. Alternative seed-handling strategies in primates: seed-spitting by long-tailed macaques (*Macaca fascicularis*). *Oecologia*, 82, 166-171.
- [2] Altmann, J. 1974. Observational study of behavior: sampling methods. *Behaviour*, 49, 227-267.